VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

1. (Amended) A method of monitoring the temperature of a biochemical reaction in a reaction mixture, said method comprising effecting the reaction in the presence of a fluorescently labelled temperature probe DNA sequence which comprises a double stranded region which denatures at a predetermined temperature, the fluorescent label of said temperature probe sequence being arranged so that a detectable signal occurs at the point at which denaturation of the said region takes place; and monitoring fluorescence from said reaction mixture so as to determine when the said predetermined temperature has been reached.

6. (Amended) A method according to [any one of claims 1 to] claim 1 or claim 3 wherein the fluorescent label [used in the method of the invention may utilise] uses fluorescence resonance transfer (FRET) as the basis of the signal.

9. (Amended) A method according to claim [8] 7 wherein the reporter and quencher molecules are located on different strands of a DNA temperature probe sequence such that on hybridisation of the strands, they are brought into close proximity to each other.

12. (Amended) A method according to [any one of the preceding claims] claim 1 wherein the length of the temperature probe sequence is used to set the said predetermined temperature.

13. (Amended) A method according to [any one of the preceding claims] claim 1 wherein the GC content of the temperature probe sequence is modified to obtain the desired predetermined temperature.

14. (Amended) A method according to [any one of the preceding claims] claim 1 wherein the biochemical reaction is an amplification reaction.